REMARKS

Introductory Comments

Applicant acknowledges the objections to the drawings and specification and has amended the drawings and specification in view of Examiner's comments.

Claims 1-7 were pending in this application. With this amendment, Applicant amends claims 1-5 and adds new claims 8-19. Thus, claims 1-19 are now pending.

Drawing objections

Applicants submit herewith a Letter to the Official Draftsman showing proposed amendments to Figures 5, 7, 8, 9, 10, 11 and 18 to address the Examiner's objections to the drawings. Replacement sheets are also enclosed with the Letter to the Official Draftsman.

Applicant has the following comments with regard to the objections to the drawings in paragraph 5 of the Office Action.

- regarding page 8 line 25 – page 9 line 1: Page 9 lines 6-9 states: "the CAD system 102 can also retrieve information directly from the database 118 or can indirectly retrieve information through the server CAD adapter 120." Thus, both direct and indirect communication lines between the CAD system 102 and the database 118 are appropriate in Fig. 1.
- regarding page 13 line 23: a proposed amendment to the specification is enclosed herewith.
- regarding "Figure 5, reference numerals 504 and 402 drawn to the same part.". The reference numeral 402 indicates that the part is a web object. The reference numeral 504 is used to show a relationship, namely to indicate that the web object 402 is also a parent object 504 of a child object 506. Applicant submits that this is not a failure to comply with 37 CFR § 1.84(p)(4) which states: "The same part of

an invention appearing in more than one view of the drawing must always be designated by the same reference character". This is a case where a part is both a web object 402 and a parent object 504..

Applicant has the following comments with regard to the objections to the drawings in paragraphs 6 and 7 of the Office Action.

- regarding 609 and 180: a proposed amendment to Figures 7 and 18, respectively, is enclosed herewith
- regarding 1510: a proposed amendment to the specification is enclosed herewith.
- regarding 1802: a proposed amendment to Figure 18 is enclosed herewith

Specification objections

With regard to the objections to the abstract in paragraph 10 of the Office Action, Applicant encloses a proposed new Abstract herewith..

Applicant has the following comments with regard to the objections to the disclosure in paragraph 11 of the Office Action.

- regarding page 8 line 25 – page 9 line 1: Page 9 lines 6-9 states: "the CAD system 102 can also retrieve information directly from the database 118 or can indirectly retrieve information through the server CAD adapter 120." Thus, both direct and indirect communication lines between the CAD system 102 and the database 118 are appropriate in Fig. 1.
- regarding page 13 line 9: a proposed amendment to Figures 7 is enclosed herewith
- regarding page 13 line 23: a proposed amendment to the specification is enclosed herewith

- regarding page 13 line 25: a proposed amendment to Figures 9 is enclosed herewith
- regarding page 14 line 10: a proposed amendment to Figures 11 is enclosed herewith
- regarding page 15 line 8: a proposed amendment to the specification is enclosed herewith
- regarding page 15 line 10: a proposed amendment to the specification is enclosed herewith
- regarding page 16 line 20: a proposed amendment to the specification is enclosed herewith
- regarding page 17 line 25: a proposed amendment to the specification is enclosed herewith

Claim rejections

Claims 1-7 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0012007 A1 to Twigg (hereinafter "Twigg"). Claims 1-4 and 7 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,397,117 to Burrows et al. (hereinafter "Burrows"). Claims 1, 2 and 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,815,683 to Vogler (hereinafter "Vogler").

Twigg

Claims 1-7 were rejected under 35 U.S.C. § 102(e) as being anticipated by Twigg.

Twigg discloses a server computer that is configured to store a database having a plurality of design files. A client computer selects from the design files from the database on the server computer via the internet. In response to the selection of the design files, the

server computer instantiates in a memory thereof a copy of the selected design file. The server computer then determines in memory where the connection points of a feature presented by one object of the design file is coincident with or closely adjacent a connection point of another feature represented by another object of the design file. The features represented by the object are displayed on the display of the client computer with the connection points coincident or closely adjacent.

In contrast, amended claim 1 recites a method of "modifying a product configuration form" The method of amended claim 1 comprising the steps of "receiving over a network a form modification request corresponding to a modification of the product configuration form from a client computer; generating in a design system an updated product configuration form in which at least one of the at least one field is modified in accordance with the form modification request and permitted design configurations; and sending the updated product configuration form over the network to the client computer."

Twigg does not disclose, teach or suggest any method for modifying a product configuration form, nor the step of "receiving . . . a form modification request corresponding to a modification of the product configuration form," nor the step of "generating . . . an updated product configuration form in which at least one field is modified in accordance with the form modification request", nor the step of "sending the updated product configuration form over the network to the client computer" as recited in amended claim 1. As opposed to modifying and sending forms as recited in claim 1, Twigg modifies and sends "vector graphics files 222" (see Twigg, para. 47 and 56) which are displayed on the client computer as "a drawing 102" (see Twigg, para. 48 and 57). Thus, Applicants submit that claim 1 patentably defines the invention over Twigg.

Accordingly, for at least these reasons, Applicants respectfully request the Examiner find claim 1 allowable over Twigg.

Claims 2-7 depend either directly or indirectly from amended claim 1 and contain additional patentable subject matter. For instance claim 2 adds to the method of claim 1 the further distinguishing steps of "displaying the product configuration form on the client computer; receiving an input corresponding to the modification of the product configuration form on the client computer; sending the form modification request to the design system over the network; receiving over the network the updated product configuration form from the design system; and displaying the updated product configuration form on the client computer." Twigg does not disclose, teach or suggest any method for modifying a product configuration form that includes the steps of claim 2. Therefore, due to the dependence on patentably distinguishable claim 1 and the additional distinguishing subject matter of claims 2-7, Applicants respectfully request the Examiner find claims 2-7 allowable over Twigg..

Burrows

Claims 1-4 and 7 were rejected under 35 U.S.C. § 102(e) as being anticipated by Burrows.

Burrows discloses a DISTRIBUTED COMPUTER AIDED DESIGN SYSTEM AND METHOD. Burrows discloses a computer aided design system including a computer aided design server station and one or more client stations remote from the server station but connectable thereto via a communications medium such as an intranet or the internet. Referring now to Fig. 2 of Burrows, server station 22 includes an intranet/internet interface 32 including a modem 33 for connection to the communications medium via a link 23. The computer 30 includes a network monitor application 34, management application 36, and a computer aided design tool 38. Client stations 26 include a computer workstation 40 having a display 42, user input devices 44, processor 46, and a network interface 48 including a modem.

Claim 1 recites a "method of modifying a product configuration form" comprising the steps of "receiving over a network a form modification request corresponding to a modification of the product configuration form from a client computer; generating in a design system an updated product configuration form in which at least one field is modified in accordance with the form modification request and permitted design configurations; and sending the updated product configuration form over the network to the client computer." Burrows does not disclose, teach or suggest any method for modifying a product configuration form, nor the step of "receiving . . . a form modification request corresponding to a modification of the product configuration form," nor the step of "generating in a design system an updated product configuration form in which at least one field is modified in accordance with the form modification request", nor the step of "sending the updated product configuration form over the network to the client computer" as recited in amended claim 1. .

Burrows discloses forms for defining parameters of a computer aided design task to be performed. (See col. 4, lines 38-40). In Burrows, after a user has filled in the form it is submitted to the computer aided design server over the internet or intranet. In Burrows, after the completed form has been submitted, the computer aided design server then processes the data received and returns the results to the user, either in the form of some textual or graphical information, or as a file representing a completed design. (See col. 4, lines 50-60). Burrows does not disclose a method of receiving a form modification request form a client computer; nor a step of generating in a design system an updated form in accordance with the form modification request and permitted design configurations as recited in claim 1. Nor does Burrows disclose the step of sending the newly updated product configuration form over the network to the client computer as recited in claim 1.

For at least the above reasons, Applicant submits that claim 1 patentably defines the invention over Burrows. Accordingly, Applicant respectfully request the Examiner find claim 1 allowable over Burrows.

Claims 2-4 and 7 depend either directly or indirectly from amended claim 1 and contain additional patentable subject matter. For instance claim 2 adds to the method of claim 1 the further distinguishing steps of "sending the form modification request to the design system over the network; receiving over the network the updated product configuration form from the design system; and displaying the updated product configuration form on the client computer." Burrows does not disclose, teach or suggest any method for modifying a product configuration form, and receiving and displaying an updated product configuration form that includes the steps of claim 2. Therefore, due to the dependence on patentably distinguishable claim 1 and the additional distinguishing subject matter of claims 2-4 and 7, Applicants respectfully request the Examiner find claims 2-4 and 7 allowable over Burrows.

Vogler

Claims 1, 2 and 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Vogler.

Vogler discloses ACCESSING A REMOTE CAD TOOL SERVER. Vogler discloses an access facilitator program to provide access service to facilitating remote client access to computer aided design tools. The access service includes services for accepting an access connection from a client, obtaining an internetworking address of the client, receiving access requests from the client, and routing the access requests including the internetworking address to a computer aided design tool on a computer aided design tool server, resulting in the computer aided design tool directly responding to the client.

Claim 1 recites "a method of modifying a product configuration form. . . comprising the steps of: receiving over a network a form modification request corresponding to a modification of the product configuration form from a client computer; generating in a design system an updated product configuration form in which at least one field is modified in accordance with the form modification request and permitted design configurations; and sending the updated product configuration form over the network to the client computer."

In contrast, Vogler does not disclose any forms, or the ability to modify and update a form based on a form modification request, or sending an updated form to the client computer. In Vogler, and "access facilitator 14 acts as a kind of gatekeeper for a CAD tool server 10. A client 12 accesses the access facilitator 14 and requests access to the CAD tool server 10, the access facilitator authenticates the client 12 and provides access to the CAD tool server 10, thereafter the access facilitator simply detects access requests from the client 10 and routes them to the CAD tool server 10, and the CAD tool server 10 responds to the client 10 directly (see Vogler, Fig. 2 and col. 3 lines 1-15).

Vogler does not disclose, teach or suggest any method for modifying a product configuration form, nor the step of "receiving over a network a form modification request corresponding to a modification of the product configuration form from a client computer;" nor the step of "generating in a design system an updated product configuration form in which at least one field is modified in accordance with the form modification request", nor the step of "sending the updated product configuration form over the network to the client computer" as recited in amended claim 1. Therefore, removal of the rejection to claim 1 is respectfully requested.

Claims 2 and 7 depend either directly or indirectly from amended claim 1 and contain additional patentable subject matter. For instance claim 2 adds to the method of claim 1 the further distinguishing steps of "displaying the product configuration form on the client

computer; receiving an input corresponding to the modification to the product configuration form on the client computer; sending the form modification request to the design system over the network; receiving over the network the updated product configuration form from the design system; and displaying the updated product configuration form on the client computer." Vogler does not disclose, teach or suggest any method for modifying a product configuration form that includes the steps of claim 2. Therefore, due to the dependence on patentably distinguishable claim 1 and the additional distinguishing subject matter of claims 2 and 7, Applicants respectfully request the Examiner find claims 2 and 7 allowable over Vogler.

New Claims

New claims 8 and 9 added by this amendment depend from patentably distinguishable claim 4. These additional steps are described at least in the discussion of Figs. 12 and 13, page 14 lines 14-19. Accordingly, Applicant respectfully requests that the Examiner find claims 8 and 9 allowable.

New claims 10-19 are added by this amendment. New claim 10 recites a "method of implementing an administration system for use with a computer aided design (CAD) system . . . comprising the steps of: defining a plurality of CAD objects; defining a set of object properties for each of the CAD objects; defining a plurality of web objects; defining a set of object properties for each of the web objects; creating a plurality of links, each link defining a conditional relationship between a parent object and a child object, the parent object being one of the plurality of CAD objects and the plurality of web objects, and the child object being one of the plurality of CAD objects and the plurality of web objects; and defining a plurality of link relationships between the parent object and the child object." New claims 11-19 all depend from claim 10 and recite additional features relating to the administration system, CAD objects, web objects and links. This method is described at least in the

discussion of Figs. 3 and 6-11 and 15-16, page 12 lines 3-18, page 13 line 8 - page 15 line 11, page 16 line 18 – page 17 line 7 and page 18 lines 1-9. None of the art of record discloses, teaches or suggests such a method of implementing an administration system for use with a CAD system. Thus, Applicant requests the Examiner find claims 10-19 allowable.

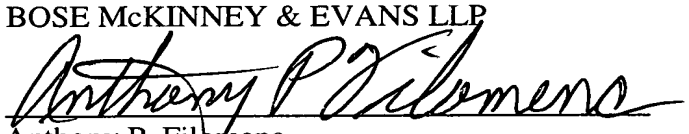
Final Remarks

Claims 1-19 are believed to be in condition for allowance. Such allowance is respectfully requested.

If necessary, Applicant requests that this Response be considered a request for an extension of time for a time appropriate for the response to be timely filed. Applicant requests that any required fees needed beyond those submitted with this Response be charged to the account of Bose McKinney & Evans LLP, Deposit Account Number 02-3223.

Respectfully submitted,

BOSE McKINNEY & EVANS LLP



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Amendments to the Drawings

Replacement sheets with revisions of Figs. 5, 7, 8, 9, 10, 11 and 18, including proposed amendments, without markings are submitted herewith in the Letter to the Official Draftsman. Also enclosed therewith are red-line drawings showing the proposed amendments to Figs. 5, 7, 8, 9, 10, 11 and 18.

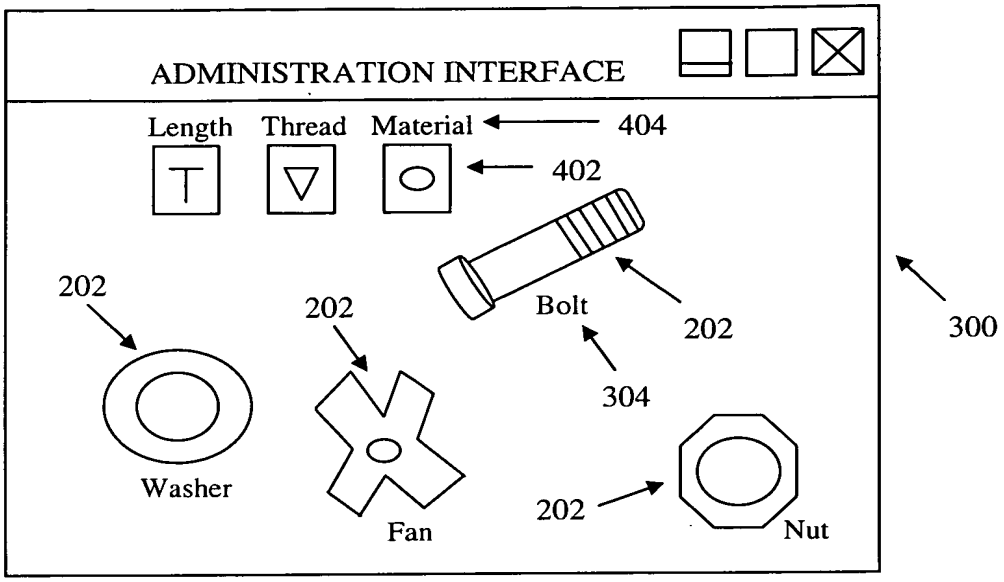


FIG. 4

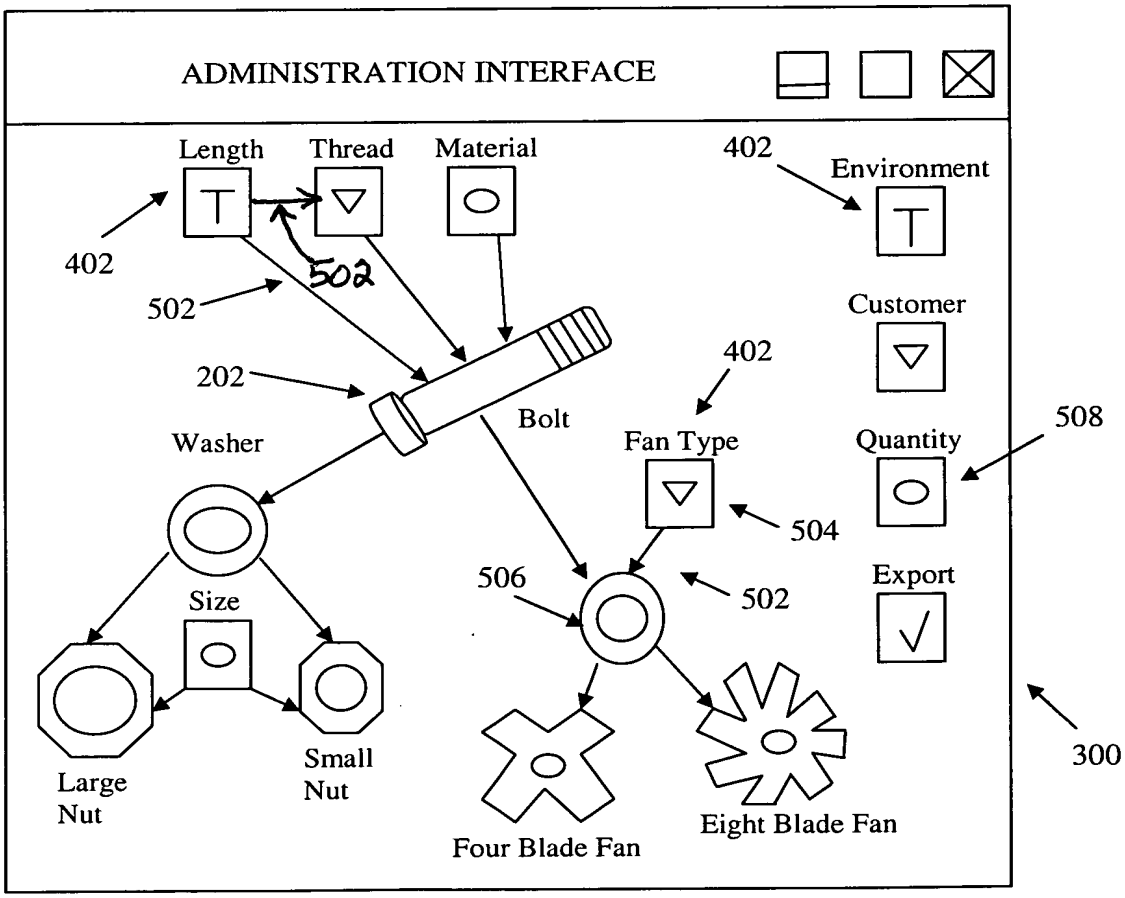
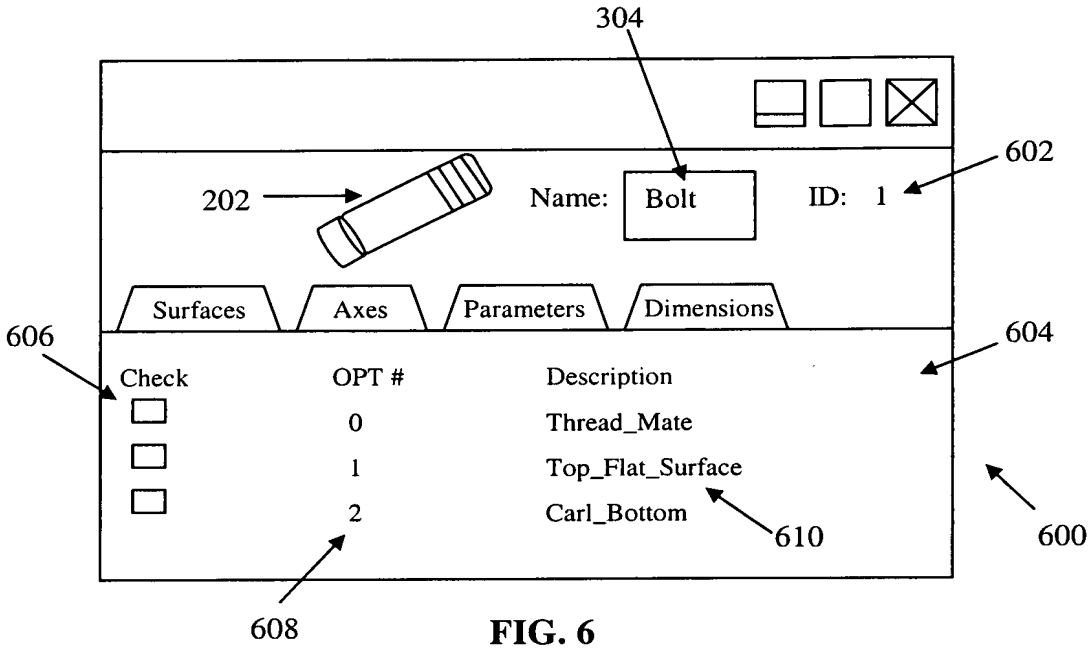


FIG. 5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602
202
Name:
Bolt
ID: 1
Surfaces
Axes
Parameters
Dimensions
606
604
Check
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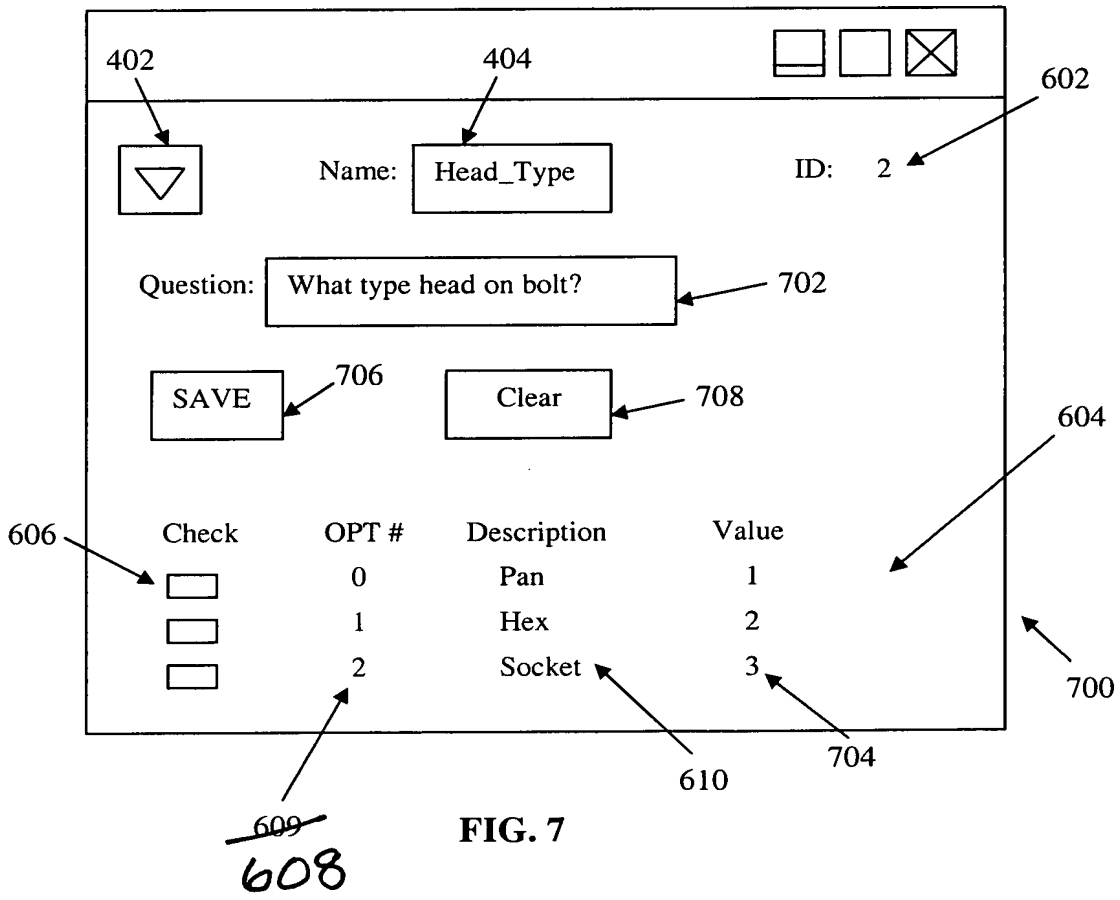
Thread_Mate
1
Top_Flat_Surface
2
Carl_Bottom
610
600
608

FIG. 6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404
602
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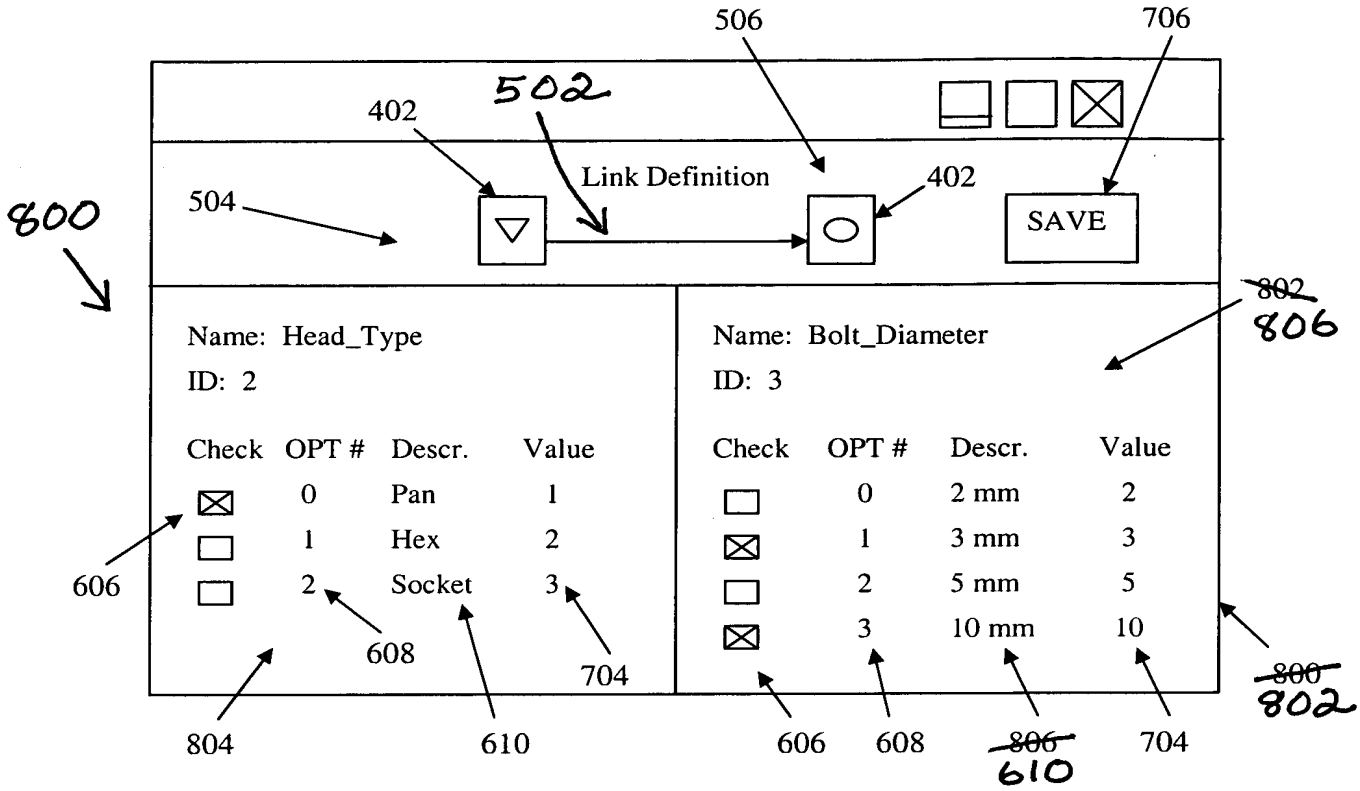
Head_Type
ID: 2
Question:
What type head on bolt?
702
SAVE
706
Clear
708
604
606
Check
OPT #
Description
Value
0
Pan
1
1
Hex
2
2
Socket
3
700
610
704
609
608

FIG. 7


800
502
506
706
402
Link Definition
402
504
SAVE
802
806
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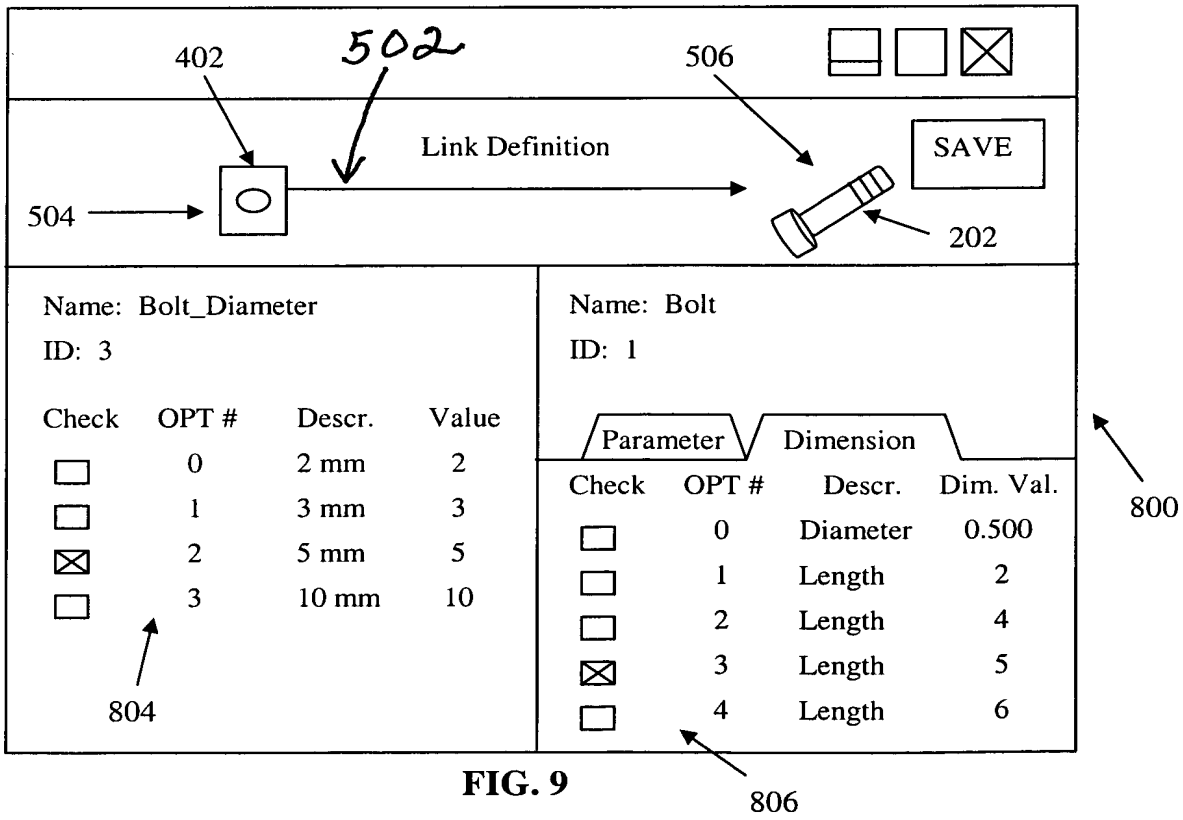
ID: 2
Check OPT # Descr. Value
0 Pan 1
1 Hex 2
2 Socket 3
Name: Bolt_Diameter
ID: 3
Check OPT # Descr. Value
0 2 mm 2
1 3 mm 3
2 5 mm 5
3 10 mm 10
606
608
704
804
610
606
608
806
610
704
800
802

FIG. 8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502
506
Link Definition
SAVE
504
202
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1 3 mm 3
2 5 mm 5
3 10 mm 10
804
Name: Bolt
ID: 1
Parameter
Dimension
Check OPT # Descr. Dim. Val.
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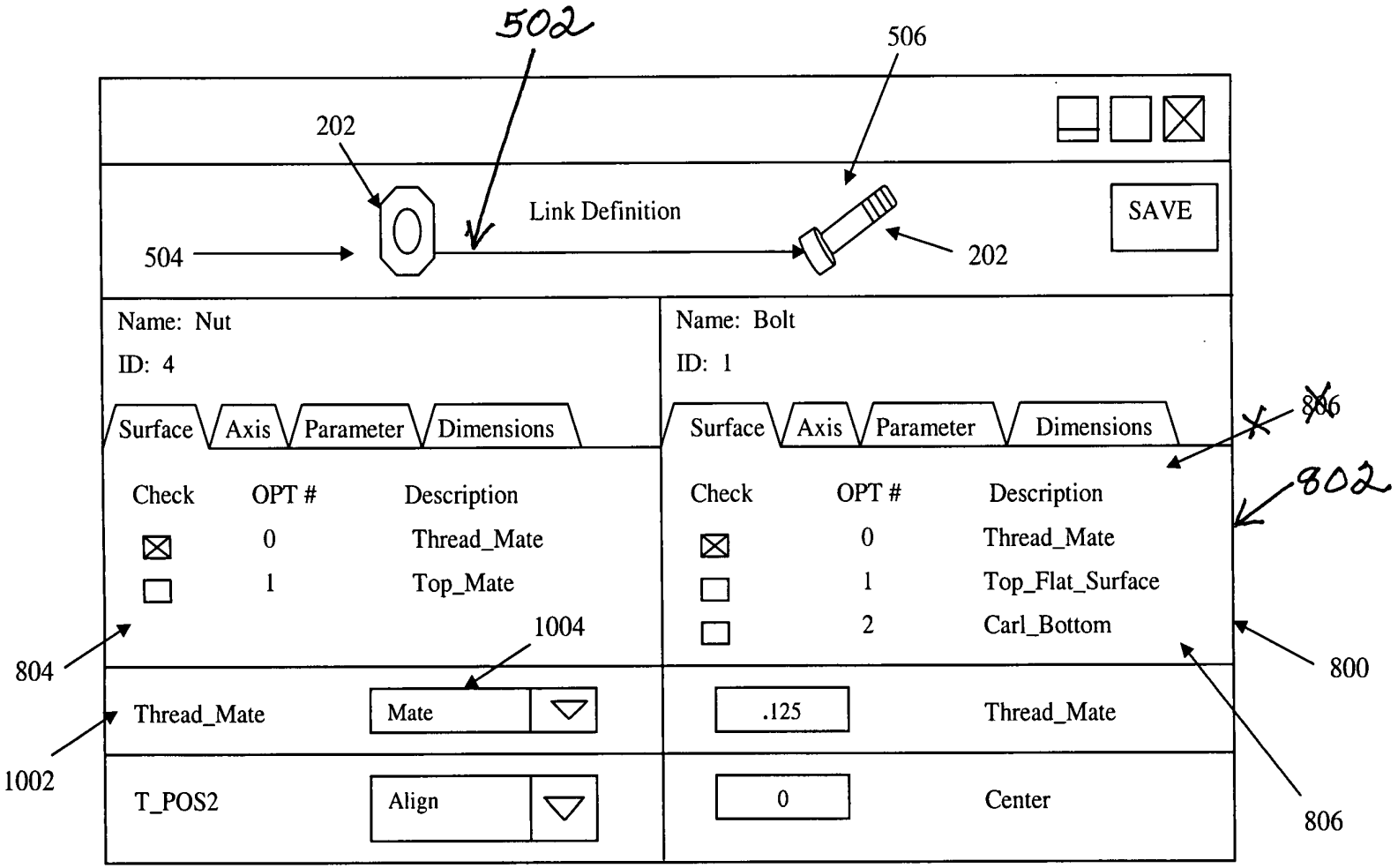
1 Length 2
2 Length 4
3 Length 5
4 Length 6
800
806

FIG. 9


502
506
202
Link Definition
SAVE
504
202
Name: Nut
ID: 4
Name: Bolt
ID: 1
Surface
Axis
Parameter
Dimensions
Surface
Axis
Parameter
Dimensions
806
802
Check
OPT #
Description
0
Thread_Mate
1
Top_Mate
Check
OPT #
Description
0
Thread_Mate
1
Top_Flat_Surface
2
Carl_Bottom
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800
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Mate
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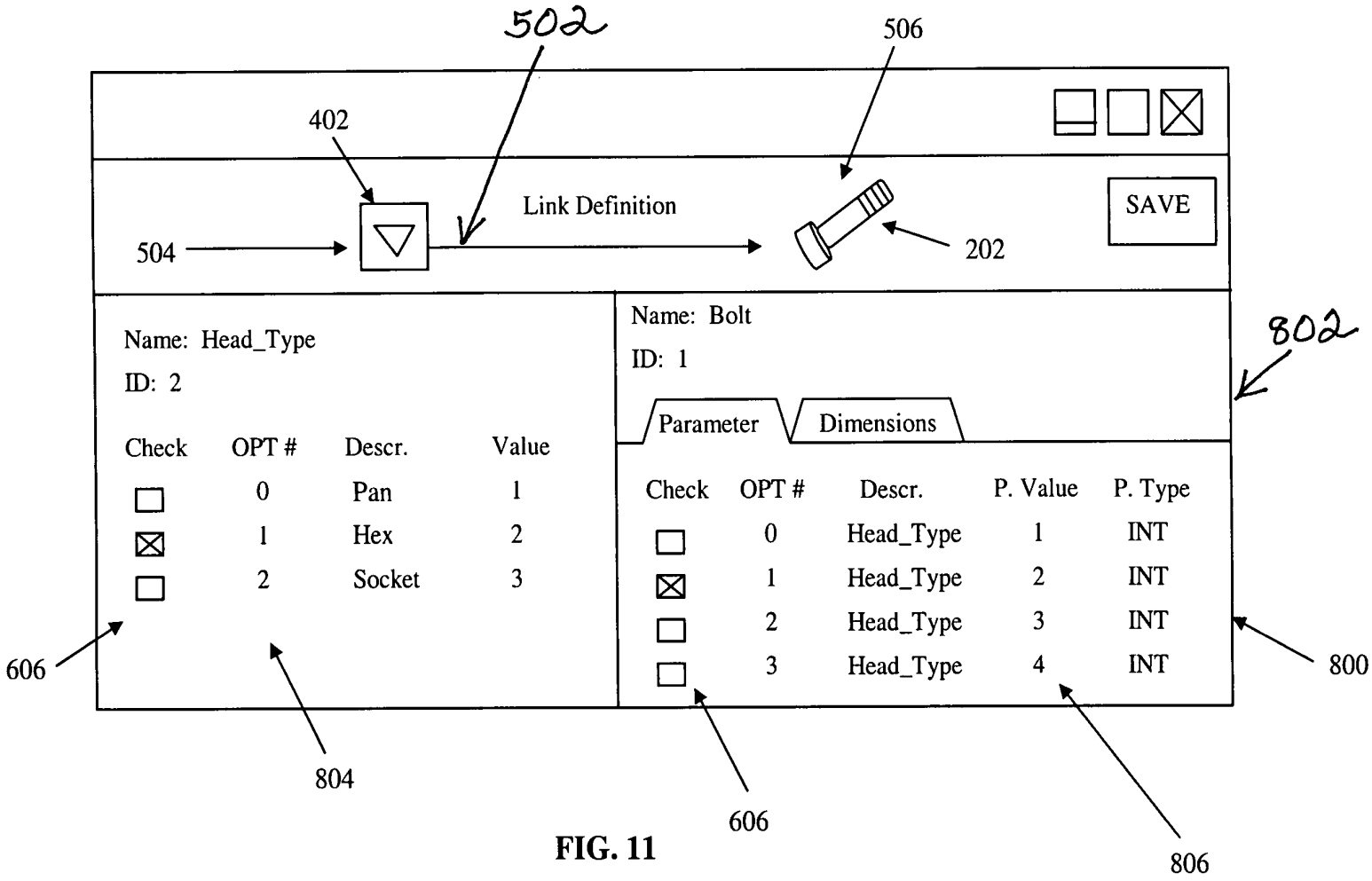
Thread_Mate
1002
T_POS2
Align
0
Center
806

FIG. 10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1 Hex 2
2 Socket 3
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ID: 1
802
Parameter
Dimensions
Check OPT # Descr. P. Value P. Type
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1 Head_Type 2 INT
2 Head_Type 3 INT
3 Head_Type 4 INT
606
804
606
806
800

FIG. 11

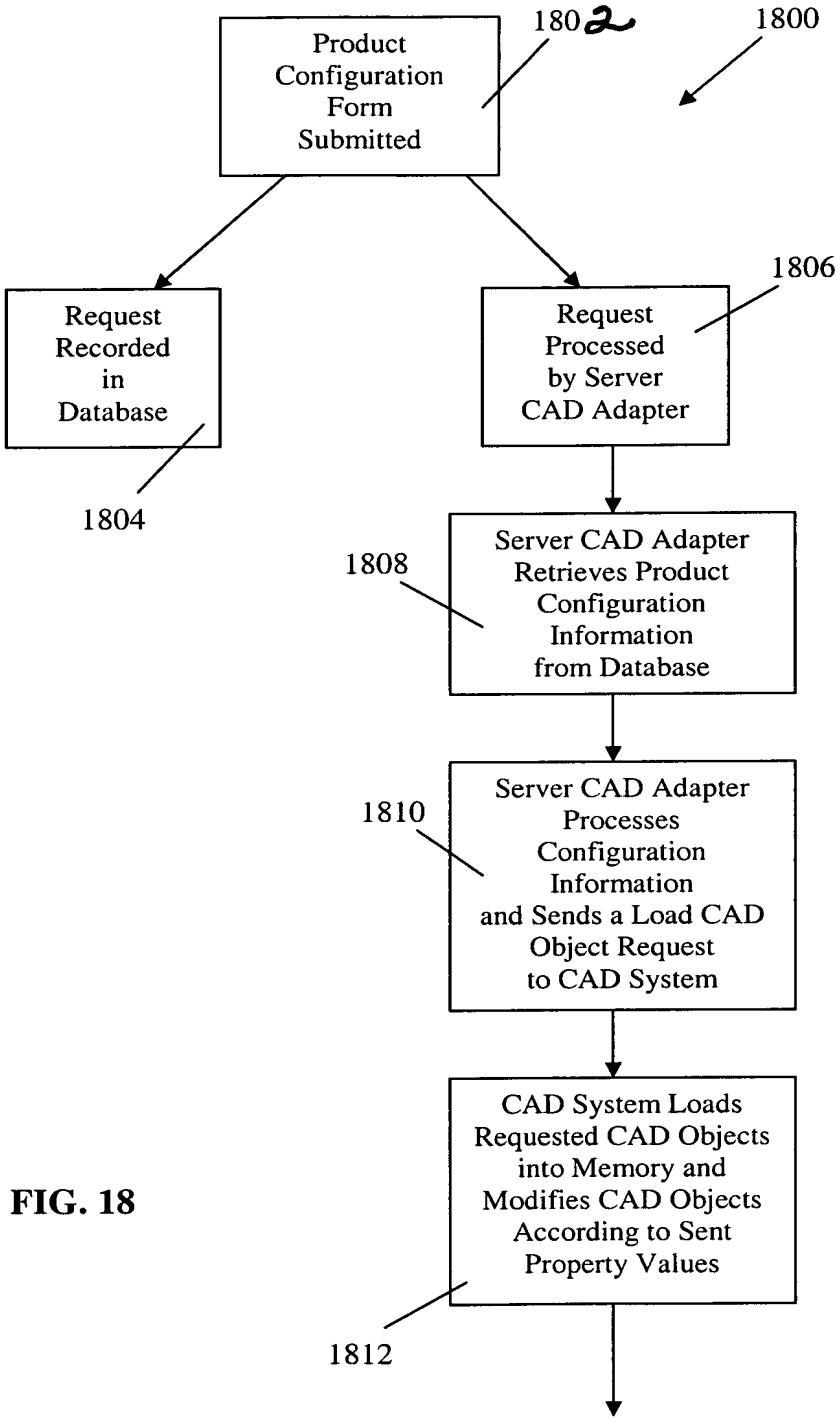
Product Configuration Form Submitted
1802
1800
Request Recorded in Database
1804
Request Processed by Server CAD Adapter
1806
Server CAD Adapter Retrieves Product Configuration Information from Database
1808
Server CAD Adapter Processes Configuration Information and Sends a Load CAD Object Request to CAD System
1810
CAD System Loads Requested CAD Objects into Memory and Modifies CAD Objects According to Sent Property Values
1812

FIG. 18